



NASA Policy Directive

NPD 8700.3A

Effective Date: April 28, 2004

Expiration Date: September 03, 2008

COMPLIANCE IS MANDATORY[Printable Format \(PDF\)](#)

Subject: Safety and Mission Assurance (SMA) Policy for NASA Spacecraft, Instruments, and Launch Services (Revalidated 4/28/04)

Responsible Office: Office of Safety and Mission Assurance

1. POLICY

a. It is NASA policy to perform the following:

- (1) Establish SMA requirements for NASA spacecraft, instruments, and launch services, including integration of the payload with the launch vehicle.
- (2) Conduct periodic audits of all elements of the project including spacecraft, instrument, and launch service providers to verify that SMA and risk management requirements and processes have been implemented.
- (3) Reserved.
- (4) Verify and validate SMA and risk management process implementation for each mission through a Certification of Flight Readiness (CoFR) process supported by an Integrated Mission Assurance Review (IMAR) ([Requirement 28006](#)). When appropriate, the CoFR will include the signature of the spacecraft or instrument contractor in addition to the signatures specified in NPD 8710.24, paragraph 5.d.(2) ([Requirement 30887](#)).

b. A launch service is defined as a NASA mission containing any one, or a combination of, the following: a NASA spacecraft, a NASA instrument, or a NASA-procured launch service. The launch service events include ground processing, flight operations, tracking, and disposal of used launch assets in the Earth's orbit or upon reentering the Earth's atmosphere. Spacecraft and/or instrument events include design/development, ground processing, science operations, data processing, tracking, and disposal in the Earth's orbit or upon reentering the Earth's atmosphere.

2. APPLICABILITY

a. This NASA Policy Directive (NPD) applies to NASA Headquarters, NASA Centers, including Component Facilities, and to the Jet Propulsion Laboratory or other contractors to the extent specified in the contract. The policy paragraphs above apply to NASA spacecraft and instruments and to NASA-procured launch services used to launch NASA spacecraft and instruments ([Requirement 28008](#)).

b. For the following subset of launch service missions, only policy paragraphs 1.a.(1), 1.a.(3), and 1.a.(4) above apply ([Requirement 30888](#)).

- (1) Launch service procured by the Air Force to launch NASA spacecraft and instruments or NASA-managed spacecraft and instruments.
- (2) Launch service procured by the NASA spacecraft or instrument developer.
- (3) Launch service procured by a NASA grant recipient.
- (4) Foreign launch service launching a NASA spacecraft and/or instrument.
- (5) Commercial launch service that contains a NASA spacecraft/instrument as a secondary payload.

c. This policy does not apply to spacecraft or instruments transported or operated from any human-rated vehicles, to launch services which utilize human-rated vehicles, or to spacecraft or instruments launched on International Space Station (ISS) International Partner launches to the ISS. Also excluded are sounding rockets, balloons, and experimental aerospace vehicles.

3. AUTHORITY

42 U.S.C. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.

4. REFERENCES

- a. NPD 8610.7, Launch Services Risk Mitigation Policy for NASA-Owned or NASA-Sponsored Payloads.
- b. NPD 8610.23, Technical Oversight of Expendable Launch Vehicle (ELV) Launch Services.
- c. NPD 8610.24, Expendable Launch Vehicle (ELV) Launch Services Prelaunch Readiness Reviews.
- d. NPR 8621.1, NASA Procedural Requirements for Mishap Reporting, Investigating, and Recordkeeping.
- e. NPD 8700.1, NASA Policy for Safety and Mission Success.
- f. NPR 7120.5, NASA Program and Project Management Processes and Requirements.
- g. NPR 8000.4, Risk Management Procedures and Guidelines.
- h. NPR 8735.2, Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts.
- i. NASA-STD-8709.2, NASA Safety and Mission Assurance Roles and Responsibilities for Expendable Launch Vehicle Services.
- j. NASA-STD-8719.8, Expendable Launch Vehicle Payload Safety Review Process Standard.
- k. NASA FAR Supplement 1807.104, General Procedures.
- l. Safety and Mission Assurance Agreement for the Space Flight Enterprise, January 9, 2003.
<http://www.hq.nasa.gov/office/codeq/doctree/eaheds.pdf>
- m. Safety and Mission Assurance Agreement for the Space Science Enterprise, January 2003.
<http://www.hq.nasa.gov/office/codeq/doctree/ssciplan.pdf>
- n. Safety and Mission Assurance for the Mission to Planet Earth Enterprise, January 17, 1997.
<http://www.hq.nasa.gov/office/codeq/mtpeplan.pdf>

5. RESPONSIBILITY

- a. The Associate Administrator for Safety and Mission Assurance is responsible for the following activities:
 - (1) Defining SMA policies, procedures and guidelines, and standards for NASA spacecraft, instruments, and launch services and assuring their implementation.
 - (2) Conducting independent, technical, and internal assessments to verify SMA process implementation (as specified in SMA policies, procedures and guidelines, and standards) and on other issues deemed critical to the safety and mission success of NASA launch services.
 - (3) Chairing the IMAR and executing or delegating SMA signature authority on the CoFR for each NASA spacecraft, instrument, and launch service mission ([Requirement 28015](#)). The signature indicates concurrence in spacecraft, instrument, and launch service readiness and the satisfactory implementation of SMA processes.
- b. The Enterprise Associate Administrators who are responsible for spacecraft, instruments, and launch services shall be responsible for the following activities:
 - (1) Providing resources to support NASA spacecraft, instrument, and launch service SMA process implementation ([Requirement 28017](#)).
 - (2) Ensuring the development and implementation of spacecraft, instrument, and launch service SMA and risk management requirements (see paragraph 4.g) for each NASA spacecraft, instrument, and launch service program.
 - (3) Ensuring the development of a risk assessment relating to the integration of the payload with the launch vehicle ([Requirement 28019](#)).
 - (4) Certifying that the risks related to the success or safety of NASA spacecraft, instrument, and launch service missions have been identified, assessed, and either mitigated or accepted by the appropriate level of management ([Requirement 28020](#)).
- c. The Launch Services Program Manager is responsible for the following activities:

- (1) Ensuring the development, incorporation, and implementation of SMA and risk management requirements in KSC future and existing launch service contracts, agreements, grants, or other launch service acquisition instruments and implementing changes necessary to assure safety or mission success ([Requirement 28022](#)).
 - (2) Providing resources to support assurance process implementation by skilled, knowledgeable, and experienced KSC launch service SMA staffs ([Requirement 28023](#)).
 - (3) Defining, documenting, and implementing launch service SMA and risk management requirements for each program-managed launch service, including coordination of spacecraft and instrument assurance support activities once the spacecraft and/or instrument is integrated with the launch vehicle ([Requirement 28024](#)).
 - (4) Performing periodic audits of launch service providers and performing joint audits with the providers of key suppliers to verify ongoing implementation of agreed-to or contractual SMA and risk management requirements and processes ([Requirement 28025](#)).
 - (5) Conducting independent, technical, and internal assessments of launch service SMA process implementation ([Requirement 28026](#)).
 - (6) Participating in a documented CoFR decision process which includes the IMAR ([Requirement 28027](#)). The IMAR verifies and validates SMA implementation and is required for each NASA launch service managed by the KSC Launch Services Program Office ([Requirement 30890](#)).
- d. The KSC Safety and Mission Assurance Directorate, as the Center Director's agent, is responsible for the following activities:
- (1) Participating in a documented CoFR decision process which includes presenting the IMAR to the Associate Administrator for Safety and Mission Assurance ([Requirement 28029](#)).
 - (2) Providing an independent SMA assessment of the launch service, to include a risk assessment at the IMAR ([Requirement 28030](#)).
- e. The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities:
- (1) Providing skilled, knowledgeable, and experienced Center SMA staffs to support NASA spacecraft and instrument SMA process implementation.
 - (2) Defining, coordinating, documenting, and implementing spacecraft and instrument SMA and risk management requirements.
 - (3) Ensuring the incorporation of SMA and risk management requirements in spacecraft and instrument contracts, agreements, grants, or other acquisition instruments ([Requirement 28034](#)).
 - (4) Performing periodic audits of spacecraft and instrument providers and performing joint audits with the providers of their key suppliers to verify ongoing implementation of agreed-to or contractual SMA and risk management requirements and processes ([Requirement 28035](#)).
 - (5) Evaluating the implementation of SMA and risk management requirements in existing spacecraft and instrument contracts, agreements, grants, and other acquisition instruments and recommending changes ([Requirement 28036](#)).
 - (6) Assessing and establishing confidence in the success potential and safety for each NASA spacecraft and instrument by conducting independent, technical, or internal SMA assessments ([Requirement 28037](#)).
 - (7) Participating in the IMAR for each associated NASA spacecraft and/or instrument being launched ([Requirement 28038](#)).
- f. For NASA missions using launch services not managed by the KSC Launch Services Program Office, the spacecraft or instrument program or project implementation Center SMA Director, as the Center Director's agent, will coordinate spacecraft, instrument, and launch service CoFR activities with the Associate Administrator for Safety and Mission Assurance ([Requirement 28039](#)).
- g. When a spacecraft or instrument does not have an assigned responsible NASA Center and/or does not use a KSC-managed launch service, the assigned Headquarters Enterprise office will be responsible for implementing this policy via the program/project manager ([Requirement 28040](#)).

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS

None.

8. CANCELLATION

NPD 8700.3 dated Sep 3, 2003.

REVALIDATED

April 28, 2004

/s/Sean O'Keefe
Administrator

ATTACHMENT A: (TEXT)

None.

(URL for Graphic)

None.

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